

## XVIII. APPENDIX 5: Technology Assessments of PET Produced by Other Organizations

Date	Issuing Agency	Topic/Title	Methods	Findings/comments
1997	Blue Cross and Blue Shield Association	PET for Managing Medically Refractory Partial Seizures	Systematic review and Medical Advisory Panel	proprietary
1997	Blue Cross and Blue Shield Association	PET in the Diagnosis and Management of Brain Tumors	Systematic review and Medical Advisory Panel	proprietary
1997	Blue Cross and Blue Shield Association	PET for the Assessment of Cerebrovascular Disease	Systematic review and Medical Advisory Panel	proprietary
1997	Agencia de Evaluación de Tecnologías Sanitarias (AETS) Spain	PET for non-CNS tumors	Systematic Review <i>(uses VHA methods and frameworks, for studies through 1996)</i>	Spanish text with English abstract available. <ul style="list-style-type: none"> <li>• Evidence is of poor methodological quality, small and uncontrolled studies</li> <li>• Potentially a good alternative for lung cancer staging and solitary pulmonary nodules</li> <li>• Relative contribution of PET in the management of patients with cancer is inconclusive</li> <li>• PET is considered a technology under investigation.</li> </ul>
1998	Blue Cross and Blue Shield Association	PET with FDG for non-CNS cancer	Systematic reviews and Medical Advisory Panel	proprietary, but abstract available on-line <ul style="list-style-type: none"> <li>• PET with FDG for staging lung cancer and imaging patients with a solitary pulmonary nodule that cannot be determined malignant by X-ray or CT (provided the results of the test could change the patient's medical management) meet the BCBS Association's TEC criteria.</li> <li>• FDG-PET of other non-CNS cancers studies do not meet TEC criteria. (Specifically, treatment monitoring for lung cancer, head and neck cancer, lymphoma, melanoma, musculoskeletal cancers, colorectal cancer, ovarian cancer, hepatocellular carcinoma, parathyroid cancer, thymoma, prostate cancer, germ-cell cancer, or esophageal cancer.)</li> </ul>
1998	Hayes, Inc.	PET for diagnosing and staging lung cancer, for cardiac applications, neurologic applications, CNS tumors, non-CNS head and neck tumors, other malignancies	Systematic reviews	proprietary

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1998	ECRI	Cost-effectiveness analysis of PET in lung cancer diagnosis and staging	Meta-analysis and decision analysis	<ul style="list-style-type: none"> <li>PET added to the diagnostic algorithm is cost-effective for patients with proven lung cancer to confirm resectability, but is not cost-effective when used earlier in the diagnostic algorithm</li> <li>diagnosing SPN decreased life expectancy and increased costs, compared to the reference strategy</li> <li>SPN strategy using CT for initial diagnosis, needle biopsy to confirmation positive results, and PET to confirm negatives attained greatest life expectancy</li> </ul>
1998	Basque Office for Health Technology Assessment (OSTEBA) Spain	The clinical utility of PET	Narrative review	English text not available
1998	Medical Technology Section Swiss Federal Office of Social Security (SFOSS), Switzerland	PET use at two Swiss hospitals	Evaluation registry	English text not available
1998	Alberta Heritage Foundation for Medical Research (AHFMR), Canada	Functional diagnostic imaging in epilepsy	Systematic review	<ul style="list-style-type: none"> <li>PET has advantages over existing functional imaging methods in terms of accuracy of localization of lesions in patients with MRE. However, it has not yet been able to replace other technologies, and is not helpful for many patients with non-temporal lobe epilepsy.</li> <li>Of the functional diagnostic imaging methods considered, only PET has a potential place in routine management of some epilepsy patients. Further work would be needed to define its role and economic costs and benefits.</li> </ul>
1998	Center for Practice and Technology Assessment, Agency for Health Care Policy and Research (AHCPR), USA	FDG-PET scans for the localization of epileptogenic foci	Systematic review	<ul style="list-style-type: none"> <li>PET, SPECT and invasive EEG have been used at various epilepsy centers to identify additional candidates who might benefit from curative epilepsy surgery</li> <li>FDG-PET scans show hypometabolic areas concordant with epileptogenic foci indicated by other diagnostic tests such as EEG and MRI. PET also showed discordant results in many patients with EEG-identified epileptogenic foci.</li> <li>Available data were insufficient to determine whether PET scans might reliably substitute for EEG, or to determine the contribution of confirmatory PET scans to the management of patients with complex partial seizures</li> </ul>
1998	Committee for Evaluation and Diffusion of Innovative Technologies (CEDIT), France	FDG-PET and Cdet (coincidence detection emission tomography) imaging in Assistance Publique-Hôpitaux de Paris (AP-HP)	Expert panel	<p>French text with English abstract:</p> <ul style="list-style-type: none"> <li>Assessment addressing technical aspects, clinical uses, economics, regulatory issues, and recommendations from perspective of AP-HP system.</li> <li>Literature supports positron imaging in prostatic cancer and has potential value in at least four areas: bronchopulmonary cancer, colorectal cancer, lymphoma, and breast cancer</li> <li>CEDIT recommends establishing a PET center for AP-HP cancer patients and making Cdet available for routine oncological use. And funding an evaluation comparing the effectiveness and diagnostic contribution of PET and Cdet in pre-operative staging patients with lung cancer</li> </ul>

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1999	NHS Health Technology Assessment Programme for the Medical Research Council, NHS UK	Potential role of PET in the NHS and establishing key health tech. assessment questions relating to PET in the UK	Systematic review and Delphi survey <b>Updates and expands WHA review using WHA methods and frameworks, for studies through January 1998</b>	<p>Under Council review</p> <ul style="list-style-type: none"> <li>• Includes myocardial and neuropsychiatric applications and all positron imaging modalities</li> <li>• evidence relating to diagnostic accuracy limited by bias and often relate only to small patient numbers</li> <li>• evidence is needed on the cost-effectiveness of positron imaging modalities in all of the advocated clinical indications</li> <li>• Research priorities identified in descending order:</li> <li>• relative cost-effectiveness of full ring PET and gamma camera PET to pre-operatively stage patients with lung cancer</li> <li>• Compare partial ring to full ring PET in oncology</li> <li>• Relative cost-effectiveness of full ring PET and gamma camera PET to stage and monitor treatment response in patients with breast cancer</li> <li>• relative cost-effectiveness of gamma PET to collimated 511 keV positron imaging for selecting patients for myocardial revascularization surgery</li> </ul>
1999	AETTS, Spain	PET in neurology	Systematic review	In preparation

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